CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER: 21-470

APPROVED LABELING

Page: 1 of 10

FINACEA™

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- 2 (azelaic acid) Gel, 15%
- 4 For Dermatologic Use Only Not for Ophthalmic, Oral, or Intravaginal Use
- 5 Rx only
- 7 DESCRIPTION
- 8 FINACEA™ (azelaic acid) Gel, 15%, contains azelaic acid, a naturally occurring saturated dicarboxylic acid.
- 9 Chemically, azelaic acid is 1,7-heptanedicarboxylic acid, with the molecular formula C₉ H₁₆ O₄, a molecular weight
- of 188.22, and the structural formula:

- Azelaic acid is a white, odorless crystalline solid that is poorly soluble in water at 20°C (0.24%), but freely soluble
- in boiling water and in ethanol.
- 14 Each gram of FINACEATM Gel, 15%, contains 0.15 gm azelaic acid (15% w/w) as the active ingredient in an
- 15 aqueous gel base containing benzoic acid (as a preservative), disodium-EDTA, lecithin, medium-chain triglycerides,
- 16 polyacrylic acid, polysorbate 80, propylene glycol, purified water, and sodium hydroxide to adjust pH.

CLINICAL PHARMACOLOGY

- 19 The mechanism(s) by which azelaic acid interferes with the pathogenic events in rosacea are unknown.
- 21 Pharmacokinetics: The percutaneous absorption of azelaic acid after topical application of FINACEATM Gel, 15%,
- 22 could not be reliably determined. Mean plasma azelaic acid concentrations in rosacea patients treated with
- 23 FINACEA™ Gel, 15%, twice daily for at least 8 weeks are in the range of 42 to 63.1 ng/mL. These values are within
- the maximum concentration range of 24.0 to 90.5 ng/mL observed in rosacea patients treated with vehicle only.

Page: 2 of 10

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25 This indicates that FINACEA™ Gel, 15%, does not increase plasma azelaic acid concentration beyond the range 26 derived from nutrition and endogenous metabolism. In vitro and human data suggest negligible cutaneous metabolism of ³H-azelaic acid 20% cream after topical 27 28 application. Azelaic acid is mainly excreted unchanged in the urine, but undergoes some B-oxidation to shorter chain 29 dicarboxylic acids. 30 31 **CLINICAL STUDIES** 32 FINACEA™ Gel, 15%, was evaluated for the treatment of mild to moderate papulopustular rosacea in 2 clinical 33 trials comprising a total of 664 (333 active to 331 vehicle). Both trials were multicenter, randomized, double-blind, 34 vehicle-controlled 12-week studies with identical protocols. Overall, 92.5% of patients were Caucasian and 73% of 35 patients were women, and the mean age was 49 (range 21 to 86) years. Enrolled patients had mild to moderate 36 rosacea with a mean lesion count of 18 (range 8 to 60) inflammatory papules and pustules. Subjects without papules 37 and pustules, with nodules, rhinophyma, or ocular involvement, and a history of hypersensitivity to propylene glycol 38 or to any other ingredients of the study drug were excluded. FINACEATM Gel, 15%, or its vehicle were to be applied 39 twice daily for 12 weeks; no other topical or systemic medication affecting the course of rosacea and/or evaluability 40 was to be used during the studies. Patients were instructed to avoid spicy foods, thermally hot foods and drinks, and 41 alcoholic beverages during the study, and to use only very mild soaps or soapless cleansing lotion for facial 42 cleansing. 43 44 The primary efficacy endpoints were both 1) change from baseline in inflammatory lesion counts and 2) success 45 defined as a score of clear or minimal with at least a 2 step reduction from baseline on the Investigator's Global 46 Assessment (IGA): 47 48 CLEAR:

- No papules and/or pustules; no or residual erythema; no or mild to moderate telangiectasia
- 50 MINIMAL:
- 51 Rare papules and/or pustules; residual to mild erythema; mild to moderate telangiectasia

NDA 21-470 FINACEA™ (azelaic acid) Gel, 15%

Page: 3 of 10

52	MILD:
53	Few papules and/or pustules; mild erythema; mild to moderate telangiectasia
54	MILD TO MODERATE:
55	Distinct number of papules and/or pustules; mild to moderate erythema; mild to moderate telangiectasia
56	MODERATE:
57	Pronounced number of papules and/or pustules; moderate erythema; mild to moderate telangiectasia
58	MODERATE TO SEVERE:
59	Many papules and/or pustules, occasionally with large inflamed lesions; moderate erythema;
60	moderate degree of telangiectasia
61	Severe:
62	Numerous papules and/or pustules, occasionally with confluent areas of inflamed lesions;
63	moderate or severe erythema; moderate or severe telangiectasia
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65	Primary efficacy assessment was based on the intent-to-treat (ITT) population with last observation carried forward
66	(LOCF).
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68	Both studies demonstrated a statistically significant difference in favor of FINACEA™ Gel, 15%, over its vehicle is
69	reducing the number of inflammatory papules and pustules associated with rosacea and with success on the IGA in
70	the ITT-LOCF population at the end of treatment.
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Page: 4 of 10

Table 2. Inflammatory Papules and Pustules (ITT population)

	Study One	Study One	Study Two	Study Two
	FINACEA™ Gel, 15%	VEHICLE	FINACEA™ Gel, 15%	VEHICLE
	N = 164	N = 165	N = 167	N = 166
Mean lesion count				
Baseline	17.5	17.6	17.9	18.5
End of Treatment	6.8	10.5	9.0	12.1
Mean Percent Reduction	on	, ··		
	57.09/	20.09/	50.004	29.207
End of Treatment	57.9%	39.9%	50.0%	38.2%

¹ ITT population with last observation carried forward (LOCF);

81 FINACEA™ Gel, 15%, was superior to the vehicle with regard to success based on the investigator's global

assessment of rosacea on a 7-point static score at the end of treatment, (ITT population; Table 3).

Table 3. Investigator's Global Assessment at the End of Treatment¹

	Study One	Study One	Study Two	Study Two
	FINACEA™ Gel, 15%	VEHICLE	FINACEA™ Gel, 15%	VEHICLE
	N = 164	N = 165	N = 169	N = 166
CLEAR, MINIMAL or MILD at	61%	40%	62%	48%

End of Treatment (% of Patients)

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INDICATIONS AND USAGE

85 FINACEA™ Gel, 15%, is indicated for topical treatment of inflammatory papules and pustules of mild to moderate

86 rosacea. Patients should be instructed to avoid spicy foods, thermally hot foods and drinks, alcoholic beverages and

87 to use only very mild soaps or soapless cleansing lotion for facial cleansing.

¹ ITT population with last observation carried forward (LOCF);

Page: 5 of 10

Laboratories

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CONTRAINDICATIONS

- 90 FINACEA™ Gel, 15%, is contraindicated in individuals with a history of hypersensitivity to propylene glycol or any
- 91 other component of the formulation.

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WARNINGS

94 FINACEATM Gel, 15%, is for dermatologic use only, and not for ophthalmic, oral or intravaginal use.

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- There have been isolated reports of hypopigmentation after use of azelaic acid. Since azelaic acid has not been well
- 97 studied in patients with dark complexion, these patients should be monitored for early signs of hypopigmentation.

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PRECAUTIONS

- 100 General: Contact with the eyes should be avoided. If sensitivity or severe irritation develops with the use of
- 101 FINACEA™ Gel, 15%, treatment should be discontinued and appropriate therapy instituted. The safety and efficacy
- 102 of FINACEA™ Gel, 15%, has not been studied beyond 12 weeks.

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- 104 Information for Patients: Patients using FINACEATM Gel, 15%, should receive the following information and
- 105 instructions:
- FINACEATM Gel, 15%, is to be used only as directed by the physician.
- FINACEA™ Gel, 15%, is for external use only. It is not to be used orally, intravaginally, or for the eyes.
- 108 Cleanse affected area(s) with a very mild soap or a soapless cleansing lotion and pat dry with a soft towel before
- applying FINACEA™ Gel, 15%. Avoid alcoholic cleansers, tinctures and astringents, abrasives and peeling
- 110 agents.

NDA 21-470 FINACEA™ (azelaic acid) Gel, 15%

Page: 6 of 10

111	•	Avoid contact of FINACEA™ Gel, 15%, with the mouth, eyes and other mucous membranes. If it does come in
112		contact with the eyes, wash the eyes with large amounts of water and consult a physician if eye irritation
113		persists.
114	•	The hands should be washed following application of FINACEA™ Gel, 15%.
115	•	Cosmetics may be applied after FINACEA™ Gel, 15%, has dried.
116	•	Skin irritation (e.g., pruritus, burning, or stinging) may occur during use of FINACEA™ Gel, 15%, usually
117		during the first few weeks of treatment. If irritation is excessive or persists, use of FINACEA™ Gel, 15%,
118		should be discontinued, and patients should consult their physician (see ADVERSE REACTIONS).
119	•	Avoid any foods and beverages that might provoke erythema, flushing, and blushing (including spicy food,
120		alcoholic beverages, and thermally hot drinks, including hot coffee and tea).
121	•	Patients should report abnormal changes in skin color to their physician.
122	•	Avoid the use of occlusive dressings or wrappings.
123	D	rug Interactions: There have been no formal studies of the interaction of FINACEA™ Gel, 15%, with other drugs
124		
125	C	arcinogenesis, Mutagenesis, Impairment of Fertility: Long-term animal studies have not been performed to
126	ev	valuate the carcinogenic potential of FINACEA™ Gel, 15%. Azelaic acid was not mutagenic or clastogenic in a
127	b	attery of in vitro (Ames assay, HGPRT in V79 cells {Chinese hamster lung cells}, and chromosomal aberration
128	as	ssay in human lymphocytes) and in vivo (dominant lethal assay in mice and mouse micronucleus assay)
129	g	enotoxicity tests.
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131	C	ral administration of azelaic acid at dose levels up to 2500 mg/kg/day (162 times the maximum recommended
132	h	uman dose based on body surface area) did not affect fertility or reproductive performance in male or female rats.
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Pregnancy: Teratogenic Effects: Pregnancy Category B

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Page: 7 of 10

There are no adequate and well-controlled studies of topically administered azelaic acid in pregnant women. The experience with FINACEA™ Gel, 15%, when used by pregnant women is too limited to permit assessment of the safety of its use during pregnancy. Dermal embryofetal developmental toxicology studies have not been performed with azelaic acid, 15%, gel. Oral embryofetal developmental studies were conducted with azelaic acid in rats, rabbits, and cynomolgus monkeys. Azelaic acid was administered during the period of organogeneisis in all three animal species. Embryotoxicity was observed in rats, rabbits, and monkeys at oral doses of azelaic acid that generated some maternal toxicity. Embryotoxicity was observed in rats given 2500 mg/kg/day (162 times the maximum recommended human dose based on body surface area), rabbits given 150 or 500 mg/kg/day (19 or 65 times the maximum recommended human dose based on body surface area) and cynomolgus monkeys given 500 mg/kg/day (65 times the maximum recommended human dose based on body surface area) azelaic acid. No teratogenic effects were observed in the oral embryofetal developmental studies conducted in rats, rabbits and cynomolgus monkeys. An oral peri- and post-natal developmental study was conducted in rats. Azelaic acid was administered from gestational day 15 through day 21 postpartum up to a dose level of 2500 mg/kg/day. Embryotoxicity was observed in rats at an oral dose that generated some maternal toxicity (2500 mg/kg/day; 162 times the maximum recommended human dose based on body surface area). In addition, slight disturbances in the post-natal development of fetuses was noted in rats at oral doses that generated some maternal toxicity (500 and 2500 mg/kg/day; 32 and 162 times the maximum recommended human dose based on body surface area). No effects on sexual maturation of the fetuses were noted in this study. Because animal reproduction studies are not always predictive of human response, this drug should be used only if clearly needed during pregnancy. Nursing Mothers: Equilibrium dialysis was used to assess human milk partitioning in vitro. At an azelaic acid concentration of 25 µg/mL, the milk/plasma distribution coefficient was 0.7 and the milk/buffer distribution was 1.0, indicating that passage of drug into maternal milk may occur. Since less than 4% of a topically applied dose of AZELEX® Cream, 20%, is systemically absorbed, the uptake of azelaic acid into maternal milk is not expected to

Page:

8 of 10

cause a significant change from baseline azelaic acid levels in the milk. However, caution should be exercised when

FINACEATM Gel, 15%, is administered to a nursing mother.

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Pediatric Use: Safety and effectiveness of FINACEA™ Gel, 15%, in pediatric patients have not been established.

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Geriatric: Clinical studies of FINACEA™ Gel, 15%, did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects.

ADVERSE REACTIONS

In the 2 vehicle controlled, identically designed U.S. clinical studies, treatment safety was monitored in 664 patients who used FINACEATM Gel, 15%, (N=333), or the gel vehicle (N=331), twice daily for 12 weeks.

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Table 4. Cutaneous Adverse Events Occurring in ≥ 1% of Subjects in the Rosacea Trials by Treatment Group and Maximum Intensity*

	FI	NACEA TM Gel, 1:	5%	14	Vehicle	
	N=333 (100%)			N=331 (100%)		
	Mild	Moderate Severe		Mild	Moderate	Severe
	n=86 (26%)	n=44 (13%)	n=20 (6%)	N=49 (15%)	n=27 (8%)	n=5 (2%)
Burning/stinging/tingling	66 (20%)	30 (9%)	12 (4%)	8 (2%)	6 (2%) ·	2 (1%)
Pruritus	24 (7%)	14 (4%)	3 (1%)	9 (3%)	6 (2%)	0 (0%)
Scaling/dry skin/xerosis	1 (0%)	21 (6%)	8 (2%)	33 (10%)	12 (4%)	1 (0%)
Erythema/irritation	0 (0%)	6 (2%)	6 (2%)	8 (2%)	4 (1%)	2 (1%)
Edema	3 (1%)	2 (1%)	0 (0%)	3 (1%)	0 (0%)	0 (0%)
Contact dermatitis	2 (1%)	2 (1%)	0 (0%)	1 (0%)	0 (0%)	0 (0%)
Acne	2 (1%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	0 (0%)
Seborrhea	2 (1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Photosensitivity	1 (0%)	0 (0%)	0 (0%)	3 (1%)	1 (0%)	1 (0%)
Skin disease	1 (0%)	0 (0%)	0 (0%)	1 (0%)	2 (1%)	0 (0%)

^{*}Subjects may have> I cutaneous adverse event; thus, the sum of the frequencies of preferred terms may exceed the number of subjects with at least I cutaneous

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Page:

9 of 10

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179	FINACEA™ Gel, 15%, and its vehicle caused irritant reactions at the application site in human dermal safety
180	studies. FINACEA™ Gel, 15%, caused significantly more irritation than its vehicle in a cumulative irritation study.
181	Some improvement in irritation was demonstrated over the course of the clinical studies, but this improvement
182	might be attributed to subject dropouts. No phototoxicity or photoallergenicity were reported in human dermal
183	safety studies.
184	
185	In patients using azelaic acid formulations, the following additional adverse experiences have been reported rarely:
186	worsening of asthma, vitiligo depigmentation, small depigmented spots, hypertrichosis, reddening (signs of keratosis
187	pilaris), and exacerbation of recurrent herpes labialis.
188	
189	OVERDOSAGE
190	FINACEATM Gel, 15%, is intended for cutaneous use only. If pronounced local irritation occurs, patients should be
191	directed to discontinue use and appropriate therapy should be instituted (See PRECAUTIONS).
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193	DOSAGE AND ADMINISTRATION
194	A thin layer of FINACEA™ Gel, 15%, should be gently massaged into the affected areas on the face twice daily, in
195	the morning and evening. FINACEA™ Gel, 15%, has only been studied up to 12 weeks in patients with mild to
196	moderate rosacea (See CLINICAL STUDIES).
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198	HOW SUPPLIED
199	FINACEA™ Gel, 15%, is supplied in tubes in the following sizes:
200	30 g – NDC 50419-825-01
201	50 g - NDC 50419-825-02
202	
203	Storage

NDA 21-470 FINACEA™ (azelaic acid) Gel, 15%

Page: 10 of 10

204	Store at 25°C (77°F); excursions permitted between 15°-30° C (59°-86°F) [See USP Controlled Room Temperature].
204	Store at 25 C (77 1), excursions permitted between 15 -50 C (57 -66 1) [See OSI Controlled Room Temperature].
205	Distributed under license; U.S. Patent No 4,713,394
206	©2002, Berlex Laboratories. All rights reserved.
207	Component code number
208	December 23, 2002
209	Manufactured by Schering S.p.A., Segrate, Milan, Italy
210	Distributed by:
211	Berlex Laboratories, Wayne, NJ 07470

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FINACEA SAMPLE 3 GRAM TUBE

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FINACEA TRADE 30 GRAM TUBE



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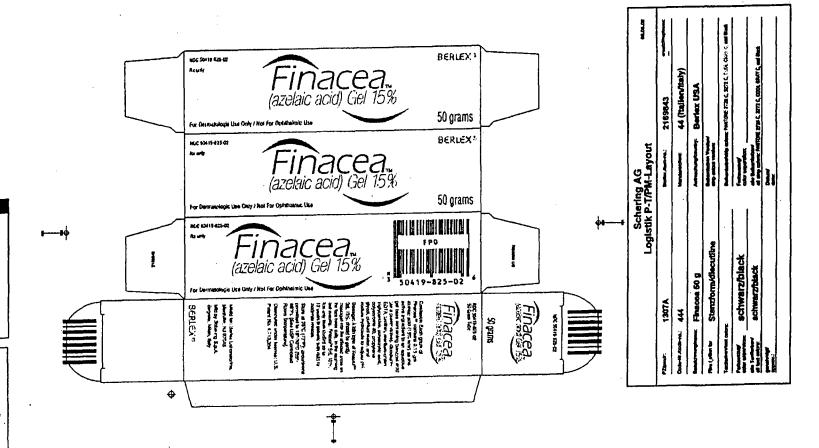
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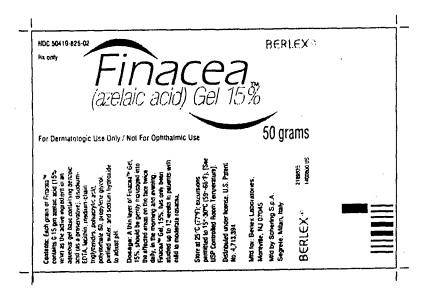
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/s/

John Kelsey 12/24/02 11:28:03 AM I am signing thhis letter for Dr. Wilkin in his absence.